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## RAW SEQUENCE LISTING

DATE: 07/24/2003

PATENT APPLICATION: US/09/134,333C

TIME: 08:08:58

Input Set : A:\066001350XCIP-a.ST25.txt

Output Set: N:\CRF4\07242003\I134333C.raw

3 <110> APPLICANT: LONGACRE-ANDRE, SHIRLEY  
4 ROTH, CHARLES  
5 NATO, FARIDABNO  
6 BARNWELL, JOHN  
7 MENDIS, KAMINI  
9 <120> TITLE OF INVENTION: RECOMBINANT PROTEIN CONTAINING A C-TERMINAL FRAGMENT OF  
PLASMODIUM MSP-1

11 <130> FILE REFERENCE: 0660-0135-0XCIP  
13 <140> CURRENT APPLICATION NUMBER: 09/134,333C  
14 <141> CURRENT FILING DATE: 1998-08-14  
16 <150> PRIOR APPLICATION NUMBER: PCT/FR97/00290  
17 <151> PRIOR FILING DATE: 1997-02-14  
19 <150> PRIOR APPLICATION NUMBER: FR96/01822  
20 <151> PRIOR FILING DATE: 1996-02-14  
22 <160> NUMBER OF SEQ ID NOS: 15  
24 <170> SOFTWARE: PatentIn version 3.1  
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27 <211> LENGTH: 291  
28 <212> TYPE: DNA  
29 <213> ORGANISM: Artificial Sequence  
31 <220> FEATURE:  
32 <223> OTHER INFORMATION: synthetic DNA  
34 <220> FEATURE:  
35 <221> NAME/KEY: CDS  
36 <222> LOCATION: (1)..(291)  
37 <223> OTHER INFORMATION:

ENTERED

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41	Glu Phe Asn Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu	
42	1 5 10 15	
44	aac tct ggc tgt ttc aga cac ttg gac gag aga gag gag tgt aaa tgt	96
45	Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys	
46	20 25 30	
48	ctg ctg aac tac aaa cag gag ggc gac aag tgc gtg gag aac ccc aac	144
49	Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn	
50	35 40 45	
52	ccg acc tgt aac gag aac aac ggc ggc tgt gac gca gac gcc aaa tgc	192
53	Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys	
54	50 55 60	
56	acc gag gag gac tcg ggc agc aac ggc aag aaa atc acg tgt gag tgt	240
57	Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys	
58	65 70 75 80	
60	acc aaa ccc gac tcg tac ccg ctg ttc gac ggc atc ttc tgc agc taa	288
61	Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser	

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62                               85                               90                               95
64 taa                                                                    291
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70 <213> ORGANISM: Artificial Sequence
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73 <223> OTHER INFORMATION: synthetic peptide
75 <400> SEQUENCE: 2
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78 1                               5                               10                               15
81 Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys
82                               20                               25                               30
85 Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn
86                               35                               40                               45
89 Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys
90                               50                               55                               60
93 Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys
94 65                               70                               75                               80
97 Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser
98                               85                               90                               95
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102 <211> LENGTH: 279
103 <212> TYPE: DNA
104 <213> ORGANISM: Plasmodium falciparum
106 <400> SEQUENCE: 3
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109 catttagatg aaagagaaga atgtaaatgt ttattaaatt acaaacaaga aggtgataaa        120
111 tgtgttgaaa atccaaatcc tacttgtaac gaaaataatg gtggatgtga tgcagatgcc        180
113 aaatgtaccg aagaagattc aggtagcaac ggaaagaaaa tcacatgtga atgtactaaa        240
115 cctgattctt atccactttt cgatggtatt ttctgcagt                                279
118 <210> SEQ ID NO: 4
119 <211> LENGTH: 354
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: synthetic DNA
126 <220> FEATURE:
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128 <222> LOCATION: (1)..(354)
129 <223> OTHER INFORMATION:
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134 1                               5                               10                               15
136 aac tct ggc tgt ttc aga cac ttg gac gag aga gag gag tgt aaa tgt        96
137 Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys
138                               20                               25                               30
140 ctg ctg aac tac aaa cag gag ggc gac aag tgc gtg gag aac ccc aac        144

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141 Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn
142          35          40          45
144 ccg acc tgt aac gag aac aac ggc ggc tgt gac gca gac gcc aaa tgc      192
145 Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys
146      50          55          60
148 acc gag gag gac tcg ggc agc aac ggc aag aaa atc acg tgt gag tgt      240
149 Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys
150 65          70          75          80
152 acc aaa ccc gac tcg tac ccg ctg ttc gac ggc atc ttc tgc agc tcc      288
153 Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser Ser
154          85          90          95
156 tct aac ttc ttg ggc atc tcg ttc ttg ttg atc ctc atg ttg atc ttg      336
157 Ser Asn Phe Leu Gly Ile Ser Phe Leu Leu Ile Leu Met Leu Ile Leu
158          100          105          110
160 tac agc ttc att taa taa      354
161 Tyr Ser Phe Ile
162          115
165 <210> SEQ ID NO: 5
166 <211> LENGTH: 116
167 <212> TYPE: PRT
168 <213> ORGANISM: Artificial Sequence
170 <220> FEATURE:
171 <223> OTHER INFORMATION: synthetic peptide
173 <400> SEQUENCE: 5
175 Glu Phe Asn Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu
176 1          5          10          15
179 Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys
180          20          25          30
183 Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn
184          35          40          45
187 Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys
188          50          55          60
191 Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys
192 65          70          75          80
195 Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser Ser
196          85          90          95
199 Ser Asn Phe Leu Gly Ile Ser Phe Leu Leu Ile Leu Met Leu Ile Leu
200          100          105          110
203 Tyr Ser Phe Ile
204          115
207 <210> SEQ ID NO: 6
208 <211> LENGTH: 342
209 <212> TYPE: DNA
210 <213> ORGANISM: Plasmodium falciparum
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215 catttagatg aaagagaaga atgtaaatgt ttattaaatt acaaacaaga agtgataaaa      120
217 tgtgttgaaa atccaaatcc tacttgtaac gaaaataatg gtggatgtga tgcagatgcc      180
219 aaatgtaccg aagaagattc aggtagcaac ggaaagaaaa tcacatgtga atgtactaaa      240

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221 cctgattcitt atccactttt cgatgggtatt ttctgcagtt cctctaactt cttaggaata 300
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227 <211> LENGTH: 387
228 <212> TYPE: DNA
229 <213> ORGANISM: Plasmodium falciparum
231 <220> FEATURE:
232 <221> NAME/KEY: CDS
233 <222> LOCATION: (1)..(387)
234 <223> OTHER INFORMATION:
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237 atg aag gcg cta ctc ttt ttg ttc tct ttc att ttt ttc gtt acc aaa 48
238 Met Lys Ala Leu Leu Phe Leu Phe Ser Phe Ile Phe Phe Val Thr Lys
239 1 5 10 15
241 tgt caa tgt gaa aca gaa agt tat aag cag ctt gta gcc aac gtg gac 96
242 Cys Gln Cys Glu Thr Glu Ser Tyr Lys Gln Leu Val Ala Asn Val Asp
243 20 25 30
245 gaa ttc aac atc tcg cag cac caa tgc gtg aaa aaa caa tgt ccc gag 144
246 Glu Phe Asn Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu
247 35 40 45
249 aac tct ggc tgt ttc aga cac ttg gac gag aga gag gag tgt aaa tgt 192
250 Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys
251 50 55 60
253 ctg ctg aac tac aaa cag gag ggc gac aag tgc gtg gag aac ccc aac 240
254 Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn
255 65 70 75 80
257 ccg acc tgt aac gag aac aac ggc ggc tgt gac gca gac gcc aaa tgc 288
258 Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys
259 85 90 95
261 acc gag gag gac tcg ggc agc aac ggc aag aaa atc acg tgt gag tgt 336
262 Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys
263 100 105 110
265 acc aaa ccc gac tcg tac ccg ctg ttc gac ggc atc ttc tgc agc taa 384
266 Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser
267 115 120 125
269 taa 387
272 <210> SEQ ID NO: 8
273 <211> LENGTH: 127
274 <212> TYPE: PRT
275 <213> ORGANISM: Plasmodium falciparum
277 <400> SEQUENCE: 8
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280 1 5 10 15
283 Cys Gln Cys Glu Thr Glu Ser Tyr Lys Gln Leu Val Ala Asn Val Asp
284 20 25 30
287 Glu Phe Asn Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu
288 35 40 45
291 Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys
292 50 55 60

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295 Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn  
 296 65 70 75 80  
 299 Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys  
 300 85 90 95  
 303 Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys  
 304 100 105 110  
 307 Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser  
 308 115 120 125

311 &lt;210&gt; SEQ ID NO: 9

312 &lt;211&gt; LENGTH: 330

313 &lt;212&gt; TYPE: DNA

314 &lt;213&gt; ORGANISM: Plasmodium falciparum

316 &lt;220&gt; FEATURE:

317 &lt;221&gt; NAME/KEY: CDS

318 &lt;222&gt; LOCATION: (1)..(330)

319 &lt;223&gt; OTHER INFORMATION:

W--&gt; 321 &lt;400&gt; 9

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 323 Glu Thr Glu Ser Tyr Lys Gln Leu Val Ala Asn Val Asp Glu Phe Asn  
 324 1 5 10 15  
 326 atc tcg cag cac caa tgc gtg aaa aaa caa tgt ccc gag aac tct ggc 96  
 327 Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu Asn Ser Gly  
 328 20 25 30  
 330 tgt ttc aga cac ttg gac gag aga gag gag tgt aaa tgt ctg ctg aac 144  
 331 Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys Leu Leu Asn  
 332 35 40 45  
 334 tac aaa cag gag ggc gac aag tgc gtg gag aac ccc aac ccg acc tgt 192  
 335 Tyr Lys Gln Glu Gly Asp Lys Cys Val Glu Asn Pro Asn Pro Thr Cys  
 336 50 55 60  
 338 aac gag aac aac ggc ggc tgt gac gca gac gcc aaa tgc acc gag gag 240  
 339 Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp Ala Lys Cys Thr Glu Glu  
 340 65 70 75 80  
 342 gac tcg ggc agc aac ggc aag aaa atc acg tgt gag tgt acc aaa ccc 288  
 343 Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr Cys Glu Cys Thr Lys Pro  
 344 85 90 95  
 346 gac tcg tac ccg ctg ttc gac ggc atc ttc tgc agc taa taa 330  
 347 Asp Ser Tyr Pro Leu Phe Asp Gly Ile Phe Cys Ser  
 348 100 105

351 &lt;210&gt; SEQ ID NO: 10

352 &lt;211&gt; LENGTH: 108

353 &lt;212&gt; TYPE: PRT

354 &lt;213&gt; ORGANISM: Plasmodium falciparum

356 &lt;400&gt; SEQUENCE: 10

358 Glu Thr Glu Ser Tyr Lys Gln Leu Val Ala Asn Val Asp Glu Phe Asn  
 359 1 5 10 15  
 362 Ile Ser Gln His Gln Cys Val Lys Lys Gln Cys Pro Glu Asn Ser Gly  
 363 20 25 30  
 366 Cys Phe Arg His Leu Asp Glu Arg Glu Glu Cys Lys Cys Leu Leu Asn  
 367 35 40 45

**VERIFICATION SUMMARY**

DATE: 07/24/2003

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TIME: 08:08:59

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Output Set: N:\CRF4\07242003\I134333C.raw

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L:131 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:4,Line#:129  
L:236 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:234  
L:321 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:9,Line#:319